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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,012	01/18/2002	Douglas Morgan Freimuth	YOR920010561US2	2130
54856	7590	03/30/2007		
LOUIS PAUL HERZBERG 3 CLOVERDALE LANE MONSEY, NY 10952			EXAMINER AVELLINO, JOSEPH E	
			ART UNIT	PAPER NUMBER
			2143	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/30/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/053,012

Applicant(s)

FREIMUTH ET AL.

Examiner

Joseph E. Avellino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 18-20, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. Claims 1-23 remain pending in this examination. Claims 15-17, and 21 remain withdrawn as being drawn to a nonelected invention.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-6, 8-14, 18-20, 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goyal et al. (USPN 6,976,258) (hereinafter Goyal) in view of Vaid et al. (USPN 6,137,777) (hereinafter '777).

3. Referring to claim 1, Goyal discloses a method comprising employing at least one system for differentiating at least one service class in a kernel (i.e. operating system) by providing service differentiation as a kernel service (i.e. the Office construes the term "kernel service" as a system which can call the kernel to provide a service on behalf of another entity) and using service differentiation (i.e. QoS) to perform service differentiation based on content in at least one data packet for connections accepted in said at least one system (i.e. connections are accepted pending QoS requirement fulfillment), including the steps of:

capturing at least one data packet until a complete application header is detected ("all such requests are received by the server application program") (i.e. an inherent

feature of receiving a request is that the packet has an application header) (col. 6, lines 45-50);

parsing said complete application header to determine at least one application tag (i.e. attribute information such as source and destination address 201 which are contained in the application header) (col. 9, lines 28-38);

matching said at least one application tag to at least one matching rule (i.e. where the communication channel is to one of the network addresses) (col. 9, lines 30-38);

determining a presence of at least one match with said at least one matching rule (i.e. where the communication channel is to one of the network addresses) (col. 9, lines 30-38); and

performing service differentiation (i.e. setting the quality of service guarantees, the object code calls the operating system QoS manager 127 to request an appropriate QoS guarantee to the child process 109) (col. 9, lines 38-55).

Goyal does not explicitly state that the system utilizes application tags from an application protocol. In analogous art, '777 discloses another QoS system which differentiates services based on application layer tags (i.e. traffic classes or traffic types, such as service type such as HTTP, FTP, etc., and URL of the source and destination and file types as well which all can be construed as application tags) (col. 11, line 67; col. 12, lines 55-67). '777 further discloses the use of traffic policies being applied to traffic classes to create action rules to control the traffic behavior on specific classes (col. 13, lines 10-55; col. 15, lines 5-37; col. 16, lines 28-58), and adding and deleting

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rules based on a user's request (col. 13, lines 47-55). It would have been obvious to one of ordinary skill in the art to combine the teaching of '777 with Goyal in order to improve the use of bandwidth management in a wide area network by applying various techniques for rate controlling bases on various attributes of a connection.

4. Referring to claim 2, '777 discloses the application tag includes a tag in an application protocol (i.e. a URL is a tag in HTTP) (col. 12, lines 55-65).

5. Referring to claim 3, it is an inherent feature in HTTP that the URI (i.e. destination address) is the second string in the HTTP header, (the first string is the action word, such as GET POST HEAD SYN, etc.).

6. Referring to claim 4, Goyal discloses employing a table having at least one matching rule (i.e. QoS parameter table 119) (Figure 1; col. 7, lines 60-65).

7. Referring to claim 5, Goyal discloses finding a best match (i.e. finding the network address requested) (col. 9, lines 30-45).

8. Referring to claim 6, Goyal discloses service differentiation includes rate controlling (i.e. guaranteeing a quality of service) (col. 9, lines 38-55).

9. Referring to claim 8, Goyal discloses said action includes protocol control (i.e. QoS rate guaranteeing) (col. 9, lines 30-35).

10. Referring to claim 9, Goyal discloses installing at least one matching rule (i.e. the Virtual Host QoS program 117 inserts the QoS Table 119 into the OS to be used by the QoS manager 127) (col. 7, lines 60-65).

11. Referring to claims 10 and 11, Goyal discloses detecting establishment of a new TCP connection (i.e. request for Address) (col. 1, lines 15-20; col. 6, lines 45-50).

12. Referring to claim 12, Goyal discloses the step of establishing a new TCP connection includes receiving a SYN packet, sending a SYN-ACK packet, deferring accept, receiving ACK for SYN-ACK and deferring notification of data packet (this is an inherent feature of the HTTP basic 3-way handshake for Connection synchronization which can be found in the Transmission Control Protocol DARPA Internet program Protocol Specification September 1981 prepared by Information Sciences Institute, USC, page. 31 Figure 7) (col. 6, lines 45-50).

13. Referring to claim 13, detecting application header delimiters for said data packet is an inherent feature of Goyal since without this detection step, the system would not know where the header starts and ends.

14. Claims 14, and 18-20, 22, and 23 are rejected for similar reasons as stated above.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goyal in view of '777 in view of Taylor et al. (USPN 6,728,885) (hereinafter Taylor) (cited in previous Office Actions).

15. Goyal discloses the invention substantively as described in claim 1. Goyal does not specifically disclose the step of performing service differentiation includes dropping based on rules that are created to provide better performance to the connections that are accepted. In analogous art, Taylor discloses another service differentiation system which includes dropping a connection based on rules that are created to provide better performance to the connections that are accepted (i.e. all firewall rules inherently provide better performance to those connections that are accepted since firewall rules block incoming traffic which will congest the network and thwart attackers from disabling the network) (col. 6, lines 25-30). It would have been obvious to one of ordinary skill in the art to combine the teaching of Taylor with Goyal and '777 in order to achieve requested levels of security while meeting performance constraints as supported by Taylor (col. 3, lines 20-25).

***Response to Arguments***

16. Applicant's arguments filed October 10, 2005 have been fully considered but they are moot in view of the new grounds of rejection.

***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art. As it is Applicant's right to continue to claim as broadly as possible their invention. It is also the Examiner's right to continue to interpret the claim language as broadly as possible. It is the Examiner's position that the detailed functionality (i.e. *define what is meant by an 'application tag' and how that differentiates from the combination of Goyal and '777 and Vaid used in previous rejections*) that allows for Applicant's invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph E. Averlino, Examiner  
March 12, 2007